

12. Notes on the Sitatunga or Marsh Antelope of the Sesse Islands, Lake Victoria Nyanza. By Major R. MEINERTZHAGEN, F.Z.S.

[Received January 14, 1916: Read April 4, 1916.]

(Text-figures 1 & 2.)

	INDEX.	Page
SYSTEMATIC:		
	<i>Limnotragus spekei sylvestris</i> , subsp. n.	380
ETHOLOGY		379, 380

BUGALLA ISLAND.

The southern end of Bugalla, the main island of the Sesse Group, was visited on the 21st, 22nd, and 23rd October, 1915. In all seven mature buck were examined in the flesh, whilst twenty-two mature buck and over fifty other buck, females and young, were observed, some at very close quarters. The animals were found to be so plentiful at one spot, that as many as twelve warrantable buck, nine females, and five young were seen from one anthill.

Colour, etc.—Old males appear typical of mainland specimens; a few white flecks and occasionally an obsolete stripe can be observed on the flank. Skin black and inclined to be hairless between the horns. Hair very thin on the under parts, long and coarse on the back.

Adult females were seen to be both dark brown and red, the latter colour predominating in the proportion of seven to one. Red females invariably had red young. Brown females were never seen with young, and they may be old ones past bearing.

All young seen were red, with white spots and flecks on the flanks and hind quarters. Solitary young were often observed lying in the open and away from their mothers. This is probably accounted for by the complete absence of any natural enemies on the island.

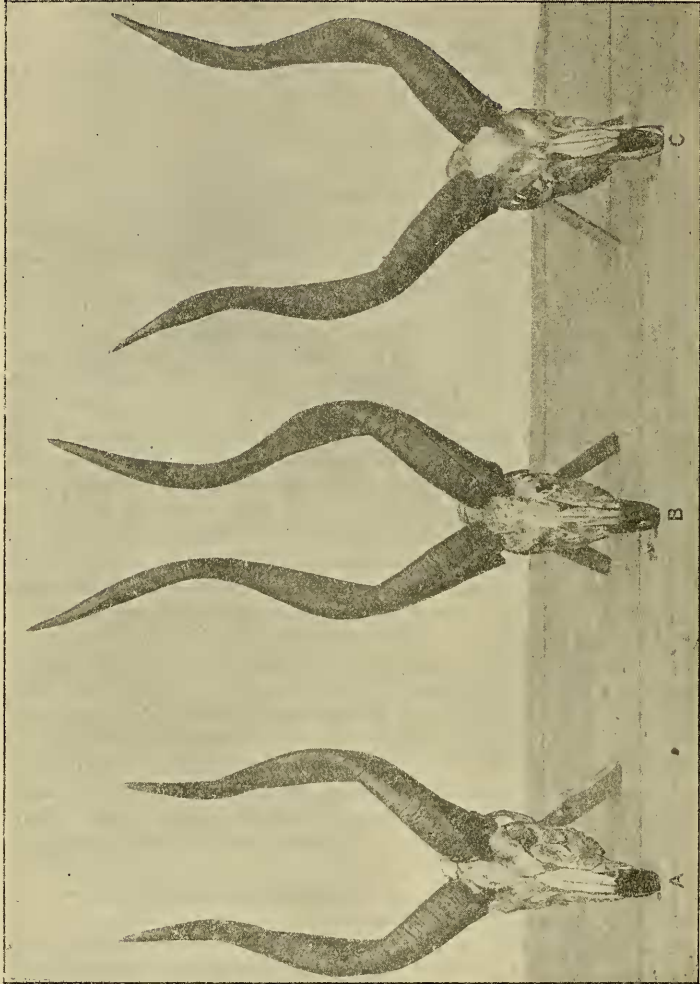
Skin very greasy. On placing a freshly shot buck in the water, a film of oil floated to the surface.

Skull and horns.—The amount of white at the tips of the horns depends on the age of the animal. It seems that the horns of very old buck tend to lose altogether the white tips, which are invariably present in younger individuals. Old buck wear their horns to a considerable degree by rubbing them on trees and anthills. This exposes the yellow under surface of the horn and adds considerably to its beauty.

The shape of the horns (text-fig. 1) is different from the usual

mainland type, having a wider splay. In specimens from the mainland the horns do not usually diverge to any great extent, the tips, however, nearly always showing a tendency to splay out considerably, whereas in the Bugalla type the tips splay out

Text-figure 1.



Photograph of the skull and horns of (A) Nkose, (B) Entebbe, an exaggerated type, (C) Bugalla Sitatunga.

but slightly. Whether this type is constant or not on Bugalla Island, I cannot say, but I never saw a "mainland" or "Nkose" type on Bugalla Island, neither did I see a "mainland" or "Bugalla" type on Nkose Island.

The skull, horn, and body measurements (in inches) of Bugalla and Nkose Sitatunga are as follows:—

No.	Locality.	Sex.	HORNS.			Skull length.	BODY.			
			Length of curve.	Girth at base.	Tip to tip.		Height.	Length less tail.	Tail.	Weight.
A.	Bugalla.	♂	24 ⁵ / ₈	7 ⁵ / ₈	16 ¹⁵ / ₁₆	11 ¹ / ₄	35 ¹ / ₂	59 ¹ / ₂	8 ¹ / ₂	204 lbs.
B.	Bugalla.	♂	22 ¹¹ / ₁₆	7 ¹ / ₂	11 ⁷ / ₈	11 ³ / ₈	36	61	9	175
C.	Bugalla.	♂	23 ⁵ / ₈	7 ³ / ₄	14 ³ / ₈	11 ¹ / ₂	35	61 ¹ / ₂	8 ¹ / ₂	196
D.	Bugalla.	♂	24	7 ¹ / ₄	17 ³ / ₈	11 ¹ / ₄	36	62	8 ³ / ₄	200
E.	Bugalla.	♂	23	34 ¹ / ₂	62	9	190
F.	Nkose...	♂	22 ¹ / ₄	7 ⁵ / ₈	7 ³ / ₈	11 ¹⁵ / ₁₆	39	65	9 ¹ / ₄	226
G.	Nkose...	♂	23 ¹ / ₄	7 ⁵ / ₈	6 ³ / ₄	11 ⁷ / ₈	37 ¹ / ₂	65	9	212

NOTE.—The only mainland skull I have been able to measure is that of an adult male shot at Entebbe, which measured 10·52 inches.

Feet.—An indiarubber-like pad stretches for 2³/₈ inches from the heel of the main hoof, with a small patch of short bristly hairs 1¹/₄ inches from the heel (text-fig. 2 A.).

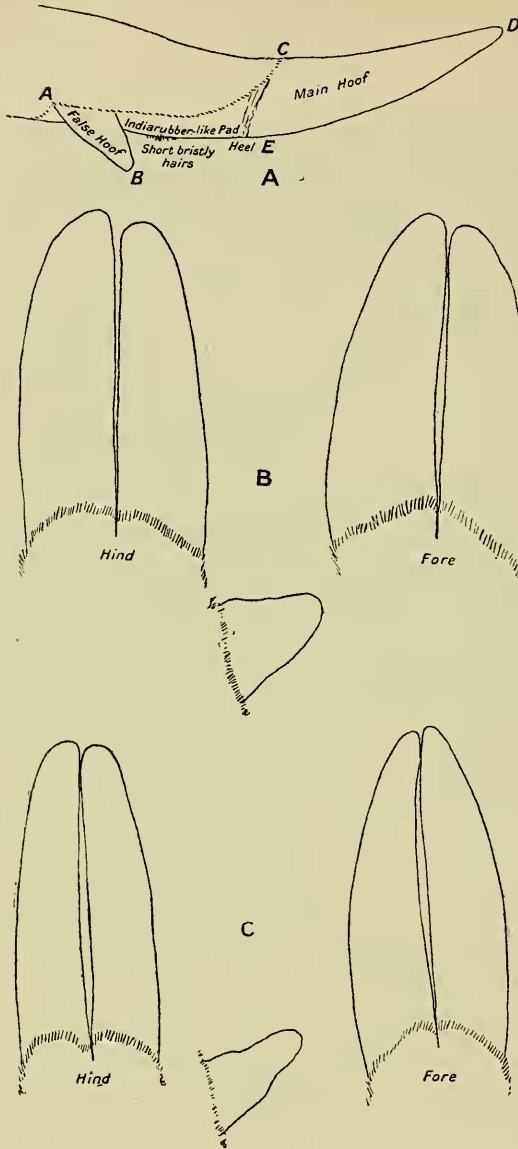
The feet splay considerably, and the hoofs can easily be moved up and down in a freshly killed specimen, so that they form an angle of about 50°. The late Captain R. B. Woosnam told me he suspected that when walking in swamps, they catch hold of stalks of weeds and papyrus to assist in progression, and this appears quite possible.

The feet measurements (in inches) are as follows:—

Specimen.	Sex.	Locality.	Hoofs, Fore and Hind.	A-D*, straight.	A-B, straight.	C-E, straight.	C-D, on curve.	Width at E across base.
A.....	♂	Bugalla.	{ F. H.	6 ¹ / ₁₆ 6 ³ / ₁₆	1 ¹ / ₈ 1 ¹ / ₁₆	1·41 1·28	3 3 ¹ / ₁₆	1·75 1·61
B.....	♂	Bugalla.	{ F. H.	6 ¹ / ₈ 6 ¹ / ₄	1 1 ¹ / ₁₆	1·39 1·27	3 3	1·73 1·59
C.....	♂	Bugalla.	{ F. H.	6 ³ / ₈ 6 ³ / ₈	1 ¹ / ₈ 1 ¹ / ₁₆	1·43 1·29	3 3 ¹ / ₁₆	1·78 1·63
D.....	♂	Bugalla.	{ F. H.	6 ¹ / ₄ 6 ³ / ₈	1 ¹ / ₈ 1 ¹ / ₈	1·37 1·27	3 3 ¹ / ₈	1·75 1·62
E.....	♂	Bugalla.	{ F. H.	6 ³ / ₈ 6 ¹ / ₈	1 ³ / ₈ 1 ¹ / ₁₆	1·38 1·28	3 ¹ / ₁₆ 3 ¹ / ₈	1·76 1·63
F.....	♂	Nkose.	{ F. H.	6 ¹ / ₄ 6 ¹ / ₂	1 1	1·68 1·62	2 ⁷ / ₈ 2 ¹⁵ / ₁₆	2·32 2·09
G.....	♂	Nkose.	{ F. H.	6 ¹ / ₂ 6 ¹ / ₂	1 1 ¹ / ₁₆	1·71 1·63	2 ⁷ / ₈ 2 ⁷ / ₈	2·34 2·17

* For explanation of these letters see text-fig. 2 A.

Text-figure 2.



- A. Diagram of foot of the Bugalla Sitatunga, for use with tables of measurements on pp. 377, 381.
 B. Hoof and false hoof of the Nkose Sitatunga, one-half natural size.
 C. Hoof and false hoof of the Bugalla Sitatunga, one-half natural size.

Habits.—These Sitatunga appear to have developed the habits of Waterbuck, living in the forest in the heat of the day and coming boldly into open grass-land at other times. At about 5.30 P.M. they come out and walk straight away from the forest, not hanging about the edge as Bushbuck do. Most animals return to the forest about 8.30 A.M., though some were seen still feeding on the open grass at 10.30 A.M. In the forest they lie up in the densest thickets, but once in the open they appear to be almost fearless. The firing of a rifle within 200 yards of grazing animals did not always induce them to seek cover. Though the human smell was always noted with suspicion, it was not always treated with alarm.

The majority of the animals seen were on the edge of the forest which grows along the shores of the island, but several were observed among the reeds on the lake edge, and among bush on the very tops of the grass-covered hills.

These Sitatunga are both browsers and grazers. They are particularly fond of feeding along the edge of the forest, and on two occasions buck were seen on their hind legs like goats, browsing off forest shrubs. The stomachs of three buck examined contained grass, leaves, and a little bark.

When alarmed the noise is a deep grunt, and I was unable to distinguish between that made by the two sexes.

A slow stately walk seems to be the usual mode of progression. I never saw one trot. When they make off they go clumsily, dragging their hind legs with the slightest suggestion of a kangaroo's gait. Their action when running or walking is very high. They are very averse to facing a hill, either up or down, and one buck, which I compelled to gallop down a steep hill, tripped over himself twice and completed the journey most clumsily, but much to his own alarm, for not content with barking and grunting at every bump he took on his downward journey, he continued loudly to advertise his concern for nearly half an hour later.

It will probably be found that this Bugalla type of Sitatunga is entitled to subspecific rank, but not having had the opportunity of examining mainland specimens, no further remarks will be made on this point.

NKOSE ISLAND.

Nkose Island, the southernmost of the Sesse Group, was visited on the afternoon of the 23rd October, 1915. It is about 2000 yards long and 300 broad. Throughout its entire length it is covered with dense forest, which overhangs the water's edge. There is practically no undergrowth, but the tangled mass of roots, creepers, and fallen trees makes progression difficult and affords dense cover for the Sitatunga, which appear to lie up in the thickest parts during the daytime. At the southern extremity of the island there is about an acre of short grass.

In all I saw twelve warrantable buck and numberless females and immature specimens. I killed one buck, and the rest of the party killed an adult buck, an immature buck, and captured a female and young, about a month old. I had exceptional opportunities for close observation, for sitting by a game-path I actually stroked several beasts as they walked slowly past me.

These Sitatunga differ remarkably from the Bugalla type. Their colour, length of skull, type of horn, greater size and weight, and different shape of feet appear to entitle them to sub-specific rank, and I propose the name of *Limnotragus spekei sylvestris* for this island form.

Colour, etc.—The adult male is of a uniform dull mouse-colour, and not a dark brown. The legs have no sign of reddish marks. There is no light mark on either the throat or under side of the neck. The hair is thicker than in Bugalla specimens, and the skin can seldom be seen through it, except on the under parts. All females seen were red, no brown ones being observed. All young were bright red, the one captured being well marked with white flecks and spots on the flanks and hind quarters.

Skull and horns.—The shape of the horns is well exemplified by the photograph (text-fig. 1). The horns of all I saw were of this "bushbuck" type.

The animal is larger and heavier than the Bugalla type, as will be seen by referring to the table of measurements on p. 377; the smallest Nkose skull is $\frac{3}{8}$ inch longer than the largest Bugalla skull.

Feet.—The hoofs are, perhaps, the most distinguishing feature, and this is well exemplified by text-fig. 2. The length of the hoofs differs but slightly from that of Bugalla specimens, but they are much stouter and stronger. The difference in shape of the false hoofs in the two forms is shown in text-fig. 2, B, C. Neither of the three specimens shot had the small hair-patch on the pad of indiarubber-like skin behind the hoof, whereas all the Bugalla specimens had such a small hair-patch. The feet of the young one captured were not abnormally long, in fact, no longer than one would expect to find in a young Bushbuck of his age.

Measurements of the feet are given in the table on p. 377.

Habits.—They are of necessity entirely browsers and eat a lot of bark. They live in dense dry forest, seldom seeing the light of the sun, for the small patch of open grass at the southern end of the island was particularly devoid of tracks. It is undoubtedly these peculiar surroundings which have produced such a peculiar form. Whether such a form exists or not on other such small afforested islands of the Sesse Group is not yet known. On Nkose Island there must be at least 200 individuals.

ADDITIONAL NOTE.—Since writing the above I have been able to examine three adult males shot on Nkose Island in November 1915. The skulls, horns, feet, and colour bear out what is said above, the measurements (in inches) being given below:—

Specimen.	Sex.	Locality.	Hoof, Fore and Hind.	A-D*, straight.	A-B, straight.	C-E, straight.	C-D, on curve.	Width at E across base.	Horns.			Skull length.
									Length (curve).	Girth at Base.	Tip to Tip.	
H ...	♂	Nkose.	{ F. H.	6 $\frac{1}{2}$ 6 $\frac{3}{8}$	1 $\frac{3}{8}$ 1 $\frac{1}{4}$	1.75 1.69	3 2 $\frac{15}{16}$	2.29 2.21	21	7	10	11 $\frac{15}{16}$
I ...	♂	Nkose.	{ F. H.	6 $\frac{1}{4}$ 6 $\frac{1}{4}$	1 $\frac{1}{4}$ 1 $\frac{1}{4}$	1.71 1.6	3 $\frac{1}{8}$ 3 $\frac{1}{4}$	2.41 2.32	20 $\frac{1}{4}$	7 $\frac{1}{4}$	5 $\frac{1}{2}$	12
J ...	♂	Nkose.	{ F. H.	6 $\frac{1}{2}$ 6 $\frac{3}{8}$	1 $\frac{3}{8}$ 1 $\frac{1}{4}$	1.69 1.64	3 $\frac{1}{4}$ 3 $\frac{1}{8}$	2.36 2.19	21 $\frac{1}{4}$	7 $\frac{1}{4}$	11 $\frac{1}{8}$	12 $\frac{1}{8}$

* For explanation of these letters see text-fig. 2 A, p. 378.